

COMMONWEALTH OF VIRGINIA

Department of Environmental Quality

Subject: Guidance Memo No. # 6130 Stormwater Local Assistance Fund Program Guidelines

To: Clean Water Financing and Assistance Program Staff

From: Alvie Edwards, Director of Administration 

Date: June 24, 2022

Copies: Karen Doran, Clean Water Financing and Assistance Program Manager

Summary:

In response to amendments to section § 62.1-44.15:29.1 of the Code of Virginia, the Stormwater Local Assistance Fund Program Guidelines were amended to allow for the award of grants for eligible projects in localities with high or above average fiscal stress to account for more than 50 percent of the costs of a project and to incorporate Total Nitrogen reductions in the scoring criteria. Additionally, changes were made to the Guidelines to allow the electronic submittal of reimbursement requests, program requirements were updated to reflect the newest recommendations for stream restoration projects, and the scoring criteria was revised to reflect input from stakeholders. The changes represent a collaborative process to improve the use of state funding for the implementation of stormwater best management practices that address cost efficiency and commitments related to reducing water quality pollutant loads.

Electronic Copy:

Once effective, an electronic copy of this guidance will be available on:

- The Virginia Regulatory Town Hall under the Department of Environmental Quality (<http://www.townhall.virginia.gov/L/gdocs.cfm?agencynumber=440>);
- The Department's website at (<https://www.deq.virginia.gov/water/clean-water-financing/stormwater-local-assistance-fund-slaf/guidelines-and-procedures>)

Contact Information:

Please contact Matthew Link, 804-929-5585, Matthew.Link@deq.virginia.gov, with any questions regarding the application of this guidance.

Certification:

As required by Subsection B of [§ 2.2-4002.1](#) of the APA, the agency certifies that this guidance document conforms to the definition of a guidance document in [§ 2.2-4101](#) of the Code of Virginia.

Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate or prohibit any particular action not otherwise required or prohibited by law or regulation. If alternative proposals are made, such proposals will be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

STORMWATER LOCAL ASSISTANCE FUND PROGRAM GUIDELINES

STORMWATER LOCAL ASSISTANCE FUND - ENABLING LEGISLATION

In order to reduce non-point source pollution from stormwater runoff, the Virginia General Assembly included Item 360 in Chapter 860 of the 2013 Acts of Assembly (the Commonwealth's 2013-2014 Budget) which created and set forth specific parameters for the administration of the Stormwater Local Assistance Fund (SLAF). With the consolidation of water quality programs with the State Water Control Board (SWCB) through HB 2048 (2013) and SB 1279 (2013) (2013 Va. Acts Chs. 756 and 793), administration of the SLAF resides with the SWCB and the Department of Environmental Quality (DEQ). The SLAF has been continued in the Commonwealth's subsequent budgets; currently budget language that authorizes the continuation of the SLAF is included in Item 379 in Chapter 552 of the 2021 Special Session I Acts of Assembly.¹

The following is the text of Item 379:

C.1. The State Comptroller is authorized to continue the Stormwater Local Assistance Fund as established in Item 360, Chapter 806, 2013 Acts of Assembly. The fund shall consist of bond proceeds from bonds authorized by the General Assembly and issued pursuant to Item C-39.40 in Chapter 806, 2013 Acts of Assembly, Item C-43 of Chapter 665, 2015 Acts of Assembly, Chapter 759, 2016 Acts of Assembly, Item C-48.10 in Chapter 854, 2019 Acts of Assembly, and Item C-70 of this Act; sums appropriated to it by the General Assembly; and other grants, gifts, and moneys as may be made available to it from any other source, public or private. Interest earned on the moneys in the Fund shall remain in the Fund and be credited to it. Any moneys remaining in the Fund, including interest thereon, at the end of each fiscal year shall not revert to the general fund but shall remain in the Fund.

2. The purpose of the Fund is to provide matching grants to local governments for the planning, design, and implementation of stormwater best management practices that address cost efficiency and commitments related to reducing water quality pollutant loads. Moneys in the Fund shall be used to meet: i) obligations related to the Chesapeake Bay total maximum daily load (TMDL) requirements; ii) requirements for local impaired stream TMDLs; iii) water quality requirements of the Chesapeake Bay Watershed Implementation Plan (WIP); and iv) water quality requirements related to the permitting of small municipal stormwater sewer systems. The grants shall be used only for the acquisition of certified nonpoint nutrient credits and capital projects meeting all pre-requirements for implementation, including but not limited to: i) new stormwater best management practices; ii) stormwater best management practice retrofits; iii) stream restoration; iv) low impact development projects; v) buffer restoration; vi) pond retrofits; and vii) wetlands restoration.

3. Out of amounts in this item, \$25,000,000 the second year from the general fund is provided for deposit in the Stormwater Local Assistance Fund.

DEQ's Clean Water Financing and Assistance Program, on behalf of the SWCB, has developed these guidelines and will administer the SLAF. These Guidelines and the grant agreements awarding funds from the SLAF are supplemental to the State Water Control Law, Chapter 3.1, Title 62.1 of the Code of Virginia (1950), as amended, and do not limit in any way the other water quality restoration, protection and enhancement, or enforcement authority of the State Water Control Board, the Department of Environmental Quality (DEQ), or the Director of DEQ.

¹ 2016 Va. Acts Chs. 68 and 758 codified the SLAF at Va. Code § 62.1-44.15:29.1 with a contingent effective date of July 1, 2017, or 30 days after the adoption by the SWCB of the regulations required to implement those acts. As of January 1, 2022 those regulations have not yet been adopted.

GRANT APPLICATION / AWARD PROCESS

Applications for SLAF grants will be solicited once each year that a state appropriation is available. Absent extraordinary circumstances, the solicitation will be announced no later than August 1, the application deadline will be on October 1, and award decisions will be announced no later than February 1. This schedule is subject to change due to extraordinary circumstances. In the event one of these milestones occurs on a day that is not a regular business day for state offices the deadline will move to the next following regular business day. The completed application form and all necessary support documentation should be mailed to:

**Clean Water Financing and Assistance Program
Department of Environmental Quality
1111 East Main Street, Suite 1400
P.O. Box 1105
Richmond, Virginia 23219**

Applications will be reviewed and ranked in accordance with the priority ranking criteria provided in these guidelines. Based on that ranking process and with consideration to providing the greatest financial and environmental benefit to as many communities as practicable, the DEQ Director will authorize a project funding list. The authorized funding list (including recipient name, grant amount, and priority point totals) will be posted on the DEQ website. DEQ will then issue Letters of Authorization to all recipients on the authorized project funding list so that they may proceed with their projects. The full commitment of funding with an executed Grant Agreement is conditioned upon the recipient meeting the program requirements as outlined in these guidelines, including the satisfactory technical review of the project design and procurement of design and construction services in accordance with the Virginia Public Procurement Act. DEQ staff will work with the authorized grant recipients as they complete the program requirements and advertise for construction bids.

Upon approval of all program requirements, the receipt of construction bids, and the development and approval of a final project budget based on as-bid or contractual costs, a grant will be awarded. In the case where a grantee has multiple projects, DEQ will execute one grant agreement per project. For each solicitation period, the DEQ Director may establish a date by which program requirements must be met and a grant agreement must be executed or authorized funds will expire.

ELIGIBLE APPLICANTS

Local governments, meaning any county, city, town, municipal corporation, authority, district, commission, or political subdivision created by the General Assembly or pursuant to the Constitution or laws of the Commonwealth, are eligible to apply for cost-share from the SLAF.

ELIGIBLE PROJECTS

Capital projects for reducing and treating stormwater runoff as identified in Attachment A. Urban Stream Restoration projects must receive an Army Corps of Engineers Nationwide 27 or Individual Permit to be eligible for funding.

The SLAF is authorized in Item 379 in Chapter 552 of the 2021 Special Session I Acts of Assembly to fund the purchase of non-point source nutrient credits. The purchase of non-point source nutrient credits will be eligible

only in funding cycles where the appropriation language allows its eligibility. Only permanent non-point source nutrient credits that have been certified by DEQ will be considered eligible for SLAF funding. Funding for the purchase of certified non-point source nutrient credits will be limited to no more than 25% of available funds in a given funding cycle.

The DEQ Director reserves the right to set a maximum allowed cost per pound of total phosphorous (TP) or total nitrogen (TN) removed (or purchased) based on the pool of applications received during any given funding cycle.

GRANT PERCENTAGE

The DEQ Director will authorize grants of up to 50% of the eligible costs of planning, design, and installation of stormwater best management practices. The recipient must be able to demonstrate the availability of the 50% local match. The Virginia Clean Water Revolving Loan Fund can be used as a source for the local match under the guidelines issued for that program. Grants awarded for eligible projects in localities with high or above average fiscal stress² may account for more than 50% of the costs of the project.

ALLOWABLE GRANT AMOUNT

The minimum grant amount per local government is \$50,000 and the maximum grant amount per local government is \$5,000,000.

The minimum and maximum grant amounts may be adjusted at the discretion of the DEQ Director.

GRANT ELIGIBLE EXPENSES

The SLAF program allows for any reasonable and necessary costs associated with the water quality elements of the stormwater management project, including all associated planning, design, permitting, inspection, and construction costs. The purchase of non-point source nutrient credits will be eligible only in funding cycles where the appropriation language allows its eligibility. Grant proposals must be supported by a need which addresses an existing stormwater pollution problem or prevents a future environmental problem due to stormwater runoff. Grant requests received which are solely supported by the economic development needs of an area or an entity may be excluded from funding participation. DEQ may reduce grant eligibility and/or the scope and size of a project to ensure the greatest financial and environmental benefit to as many communities as possible. DEQ may set a date before which construction may not have started in order for the project to be considered eligible for funding. Planning and design expenses incurred on an approved project prior to the execution of a grant agreement are eligible costs provided they are necessary and directly attributable to the project and any services or contracts are secured in accordance with State procurement requirements. Professional services (planning, design, and construction oversight) expenses are limited to 35% of construction costs. If the total cost of professional services expenses exceed 35% of the construction costs, the project will still be eligible for funding but DEQ will limit its cost share participation in these services to no more than 35% of the construction cost.

INELIGIBLE GRANT COSTS

The following expenses cannot be included when determining the allowable amount of a SLAF grant:

1. Salaries and other expenses of municipal employees are not allowable expenses for reimbursement under

² Fiscal stress data are taken from the Commission on Local Government's most recent *Report on Comparative Revenue Capacity, Revenue Effort, and Fiscal Stress of Virginia's Cities and Counties*, found at <https://www.dhcd.virginia.gov/fiscal-stress>
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the program. In addition, the cost of Force Account Labor is ineligible.

2. Administrative costs such as supplies, rent, grant administration, and/or travel.
3. Changes in the approved project scope without DEQ concurrence.
4. Change orders not attributable to the stormwater project or involving duplication of effort or work.
5. Any cost or expenditure that is determined to be unnecessary, unreasonable, or unrelated to the water quality function of the project.
6. Costs to operate or maintain the project.
7. Any interest costs associated with funds borrowed for the planning, design, or construction of the project.
8. Costs associated with post-construction monitoring of the project.

REIMBURSEMENT

Disbursement of grant funds will be made on a periodic reimbursement basis. Invoices must be submitted which fully substantiate all requests for disbursement of grant funds. All reimbursement requests must be reviewed and approved by DEQ staff prior to actual disbursement of funds. A grantee is authorized to submit reimbursement requests electronically, unless DEQ directs that the grantee submit by U.S. Mail or hand-delivery. In such cases, an original signed reimbursement request must be submitted to DEQ's Clean Water Financing and Assistance Program and one copy submitted to the appropriate DEQ regional office.

PROGRAM REQUIREMENTS

The following requirements are applicable to all projects funded through the Stormwater Local Assistance Fund:

1. Procurement of all funded goods/services must be made in conformance with the requirements of the Virginia Public Procurement Act, regardless of population size. DEQ will allow certification of engineering and/or construction procurement in order to streamline submittals.
2. When SLAF is participating in land acquisition costs, the grantee must submit copies of the basic administrative reports and/or appraisals to substantiate the value of the land being purchased.
3. Stormwater best management practices (BMPs) listed on the Virginia Stormwater BMP Clearinghouse website shall be designed and constructed in accordance with all applicable standards and specifications provided by the Virginia Stormwater BMP Clearinghouse. Stormwater management facilities accepted for use by the U.S. Environmental Protection Agency's Chesapeake Bay Program shall be designed and constructed in accordance with all applicable standards and specifications provided by the Chesapeake Bay Program. If the BMP is a retrofit that cannot fully meet the applicable design specifications, then it must meet them to the degree feasible, given space constraints and other limitations. However, cost should not be a limiting factor.
4. Stream Restoration Projects shall meet the applicable qualifying conditions and be designed and credited for pollutant reduction in accordance with the *September 2021 Unified Stream Restoration Guide*³.
5. A plan shall be submitted outlining the provisions for the long-term responsibility, maintenance, and verification, of all projects funded through the SLAF. These provisions shall include, at a minimum, a

³ The September 2021 Unified Stream Restoration Guide is a consolidation of official Chesapeake Bay Program recommendations for crediting stream restoration practices developed by the Chesapeake Stormwater Network and can be found at https://chesapeakestormwater.net/wp-content/uploads/dlm_uploads/2021/10/Unified-Stream-Restoration-Guide_FINAL_9.17.21.pdf
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description of the requirements for maintenance of the practice, a schedule of inspection and maintenance, and the identification of a person or persons who will be responsible for maintenance. Long-term responsibility and maintenance requirements for funded projects located on private property shall be set forth in an instrument recorded in the local land records and shall be consistent with 9VAC25-870-112 of the Virginia Stormwater Management Program (VSMP) Permit Regulations.

6. Post-construction documentation shall be submitted to include a Certification of Completion and As-Built Record Drawing.
7. For the purchase of certified non-point source nutrient credits, DEQ will require a purchase contract.

PRIORITY RANKING CRITERIA

DEQ will prioritize applications for grant assistance on a statewide basis. Stormwater projects or non-point source nutrient credit purchases which are the most cost effective and are expected to provide the greatest water quality benefit will be given the highest funding priority.

HIGHEST TOTAL POSSIBLE SCORE = 600 PTS

I. POLLUTANT REDUCTION (MAXIMUM 100 points)

Points will be based on the calculated reduction of total phosphorous (TP) and total nitrogen (TN) as a result of the proposed project. TP serves as the representative pollutant of concern for stormwater management compliance in the Commonwealth; however, some stormwater practices have been shown to be more effective at reducing TN. DEQ will convert calculated or purchased TN reductions to TP reductions using methodologies derived from the Commonwealth of Virginia Chesapeake Bay TMDL Phase III Watershed Implementation Plan⁴. DEQ will then assign points based on the sum total of the reductions. The established methodology for calculating the TP and TN reduction for stormwater management projects is outlined in Attachment A.

II. COST EFFECTIVENESS (MAXIMUM 200 points)

Points will be based on the projected cost of the project divided by the combined pollutant reduction as calculated in Section I.

III. IMPAIRED WATER BODIES (MAXIMUM 100 points)

Points will be based on the location and impact of the proposed project in relation to priority water bodies in the state. **Note: These categories (a – b) are additive.**

- | | |
|--|---------|
| a. Project is directly related to the requirements of the Chesapeake Bay TMDL | 60 pts. |
| b. Project is directly related to requirements of a local impaired stream TMDL | 40 pts. |
| or | |
| Project is directly related to a local impaired stream without a TMDL | 20 pts. |

4 The Commonwealth of Virginia Chesapeake Bay TMDL Phase III Watershed Implementation Plan is a planning document for attaining nutrient and sediment reductions needed to restore the Chesapeake Bay and its tidal tributaries and is located at <https://www.deq.virginia.gov/home/showpublisheddocument/4481/637469262077670000>
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IV. FISCAL STRESS-(COLG Composite Stress Index) and Local Funding (MAXIMUM 75 points)

Fifty of the points for county and city applicants will be based on the latest available Commission on Local Government composite fiscal stress index. Town applicants will be assigned the points of the surrounding county. Any applicant with a project serving more than one jurisdiction (such as public service authorities or towns located in two counties) will be assigned a weighted average from the component scores. Twenty-five points will be awarded to any applicant that has established a dedicated local funding/revenue mechanism for stormwater capital projects.

V. READINESS TO PROCEED (MAXIMUM 100 points)

Because it is important that grant recipients proceed quickly with their proposed projects, applicants that can proceed immediately with their proposed projects, or demonstrate an advanced state of readiness, will be given points for each planning activity conducted under this category. **Note: These categories are additive.**

Stormwater Quality Projects:

Final design plans approved by the locality	10 pts.
Design plans submitted and under review by the locality	10 pts.
Preliminary / Concept engineering completed	10 pts.
Executed engineering contract with approved task order issued or in-house engineering approved by applicant for this project	20 pts.
Project included in <u>most recent</u> Capital Improvement Plan, TMDL Action Plan, or has otherwise been posted for public notice.	25 pts.
All funding is in place for the local match and, if necessary, land and easements for the project have already been acquired, or land and easement acquisitions are not required.	25 pts.

Non-Point Source Nutrient Credit Purchases:

Applicant has signed a contract with a bank to purchase a number of non-point source nutrient credits for a specific cost and are immediately available.	50 pts.
Applicant has signed a contract with a bank to purchase a number of non-point source nutrient credits for a specific cost and are available within 6 months.	10 pts.
Written contract with a bank has been drafted for the purchase of non-point source nutrient credits.	10 pts.
Applicant has obtained written proposal(s) for the purchase of non-point source nutrient credits.	5 pts.
All funding is in place for the local match.	25 pts.

VI. PHASE II (SMALL) MS4 (MAXIMUM 25 points)

Applicants that are regulated under the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems will receive 25 points.

Attachment A

METHODOLOGY FOR CALCULATING TOTAL PHOSPHORUS AND TOTAL NITROGEN REDUCTION

For the purpose of determining pollution reduction rankings, applicants shall submit expected reductions of total phosphorus (TP) and total nitrogen (TN) calculated as follows:

- 1) For Virginia BMP Clearinghouse BMPs, U.S. Environmental Protection Agency Chesapeake Bay Program BMPs, and BMP retrofits:
 - a) **Initial TP and TN loads** (in pounds) shall be calculated on the Site Data tab of the Virginia Runoff Reduction Method (VRRM) Spreadsheet (Version 3.0, April 2016; 2011 or 2013 BMP Stds & Specs). Instructions for using the Spreadsheet can be found in Guidance Memo No. 16-2001 *Virginia Runoff Reduction Method Compliance Spreadsheet User's Guide & Documentation* (April 2016).
 - b) **TP and TN load reductions** (in pounds) shall be determined using the following methods, as specified:
 - i) If the proposed BMP is on the Attachment A list, then the TP and TN load reductions shall be calculated using the TP and TN removal efficiencies assigned to the selected BMP in the table.
 - ii) If the BMP being installed, enhanced, or converted cannot fully meet the design specifications for an Attachment A BMP, then the TP and TN load reductions shall be determined using the applicable Runoff Reduction (RR) or Stormwater Treatment (ST) retrofit equations or performance curves developed in the *Recommendations of the Expert Panel to Define Removal Rates for Urban Stormwater Retrofit Projects* (October 2012), on the Chesapeake Bay Program website at: http://chesapeakebay.net/documents/Final-CBP-Approved-Expert-Panel-Report-on-Stormwater-Retrofits-long_012015.pdf
- 2) **Existing BMPs:** If an applicant proposes a conversion or enhancement of an existing pond or BMP that was in place on or before June 30, 2009 (the baseline date for the Chesapeake Bay TMDL load allocations), only the incremental increase in pollutant reduction estimated consistent with the *Recommendations of the Expert Panel to Define Removal Rates for Urban Stormwater Retrofit Projects* (2012) will be eligible for scoring for this grant process. Proposals to increase the treatment capacity of a BMP that was lost due to lack of routine maintenance being performed will not be eligible for grant funds.
- 3) **Land Use Change:** If the project constitutes a land use change (e.g., planting trees where impervious surface once existed, etc.), the initial TP and TN loads shall be calculated as directed in paragraph 1a above. The proposed TP and TN loads shall be calculated using the Site Data tab of the VRRM Spreadsheet reflecting the land use change. The reduction is the difference between the initial and proposed TP and TN loads.
- 4) **Urban Stream Restoration Required Information:**
 - a) A written description of the site selection and assessment process for the project including documentation of pre-construction assessment including photographs of the reach of stream to be restored, Rosgen stream channel classification, watershed study including notable BMPs within the watershed, and conceptual design plans. .
 - b) Site-level data collected consistent with the *September 2021 Unified Stream Restoration Guide* including:
 - i) Estimated stream sediment erosion rate based on BANCS Method field surveys. In order to provide more consistency in BANCS assessments, practitioners are recommended to use the *TMDL Credit Reduction Workbook using BANCS and Protocol 1* spreadsheet provided in Appendix A of the *2020 Protocol 1 Expert Panel Report*.
 - ii) Stream bank soil bulk density; and
 - iii) Stream bank soil TN and TP concentrations.

Site level values for bulk density and nutrient concentrations are to be inserted into the spreadsheet for calculating application estimated load reductions. Likewise, application estimated load reductions shall be based on a restoration effectiveness of 50%.

Virginia Stormwater BMP Clearinghouse Non-Proprietary BMPs		
BMP Clearinghouse Specification #	Practice	Total Phosphorus Mass Load Removal (TR, as %)
2	Sheetflow to Conservation Area	50 to 75 ¹
	Sheetflow to Vegetated Filter Strip	50
3	Grass Channel	24 to 41 ¹
5	Vegetated Roof Level 1	45
	Vegetated Roof Level 2	60
7	Permeable Pavement Level 1	59
	Permeable Pavement Level 2	81
8	Infiltration Level 1	63
	Infiltration Level 2	93
9	Bioretention Level 1	55
	Bioretention Level 2	90
	Urban Bioretention	55
10	Dry Swale Level 1	52
	Dry Swale Level 2	76
11	Wet Swale Level 1	20
	Wet Swale Level 2	40
12	Filtering Practice Level 1	60
	Filtering Practice Level 2	65
13	Constructed Wetland Level 1	50
	Constructed Wetland Level 2	75
14	Wet Pond Level 1	50 (45 for coastal plain) ²
	Wet Pond Level 2	75 (65 for coastal plain) ²
15	Extended Detention Pond Level 1	15
	Extended Detention Pond Level 2	31
Virginia Stormwater BMP Clearinghouse Proprietary Devices		
BMP Clearinghouse Specification #	Device Name	Total Phosphorus Mass Load Removal (TR, as %)
16	Hydrodynamic Manufactured Devices	Please Find Percentages Here: https://swbmp.vwrrc.vt.edu/bmps/hydrodynamic-devices/
17	Filtering Manufactured Devices	Please Find Percentages Here: https://swbmp.vwrrc.vt.edu/bmps/filtering-devices/
Chesapeake Bay Program BMPs, Established Efficiencies		
Practice	Total Phosphorus Mass Load Removal (TR, as %)	
Wet Ponds and Wetlands	45	
Dry Detention Ponds and Hydrodynamic Structures	10	
Dry Extended Detention Ponds	20	
Infiltration Practices w/o Sand, Veg.	85	
Infiltration Practices w/ Sand, Veg.	85	
Filtering Practices	60	
Bioretention C/D soils, underdrain	45	
Bioretention A/B soils, underdrain	75	
Bioretention, A/B soils, no underdrain	85	
Vegetated Open Channels, C/D soils, no underdrain	10	
Vegetated Open Channels, A/B soils, no underdrain	45	
Bioswale	75	
Permeable Pavement w/o Sand, Veg. C/D soils, underdrain	20	
Permeable Pavement w/o Sand, Veg. A/B soils, underdrain	50	
Permeable Pavement w/o Sand, Veg. A/B soils, no underdrain	80	

Permeable Pavement w/ Sand, Veg. C/D soils, underdrain		20
Permeable Pavement w/ Sand, Veg. A/B soils, underdrain		50
Permeable Pavement w/ Sand, Veg. A/B soils, no underdrain		80
Chesapeake Bay Program BMPs Hydrogeomorphic Region Impacted Efficiencies		
Practice	Hydrogeomorphic Region(s)	Total Phosphorus Mass Load Removal (TR, as %)
Wetland Restoration	Appalachian Plateau Siliciclastic	12
Wetland Restoration	Coastal Plain Dissected Uplands; Coastal Plain Uplands; Coastal Plain Lowlands	50
Wetland Restoration	Blue Ridge; Mesozoic Lowlands; Piedmont Crystalline; Piedmont Carbonate; Valley and Ridge Siliciclastic; Valley and Ridge Carbonate	26
Other Practices		
Practice	Expert Panel Report for Determining Total Phosphorus Removal	
BMP Retrofits	Recommendations of the Expert Panel to Define Removal Rates for Urban Stormwater Retrofit Projects (January 2015)	
Urban Stream Restoration	Protocol 1: Consensus Recommendations for Improving the Application of the Prevented Sediment Protocol for Urban Stream Restoration Projects Built for Pollutant Removal Credit (February 2020) Protocol 2 & 3: Consensus Recommendations to Improve Protocols 2 and 3 for Defining Stream Restoration Pollutant Removal Credits (October 2020)	
Dry Channel Regenerative Stormwater Conveyance	Protocol 4: Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects (September 2014)	
Living Shoreline	Recommendations of the Expert Panel to Define Removal Rates for Shoreline Management Projects (November 2019)	
Outfall and Gully Stabilization	Protocol 5: Recommendations for Crediting Outfall and Gully Stabilization Projects in the Chesapeake Bay Watershed (October 2019)	
Notes:		
¹ See design specifications for more information.		
² Lower nutrient removal in parentheses applies to wet ponds in coastal plain terrain		